

Appl. No 10/665,640

Amdt. Dated 05/19/2006

Reply to Office action of 03/31/2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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Listing of Claims:

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1. (Currently amended) A timer device for a gas [range] stove ~~for allowing gas turning off automatically,~~ which comprising a housing, a disc-like wheel, a motor, a driving wheel, [an] a microswitch and a timing circuit[,]; wherein:

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the housing is mounted on a surface of [a] the gas stove, ~~an top surface and a bottom of the housing respectively defined with an upper and a lower round holes are formed in an top surface and a bottom surface of the housing, respectively, for the passage of a rotary-knob switch, about the periphery of the upper round hole formed with a plurality of locating holes is formed around the upper round hole~~ for the insertion of locating wheels, each of the locating wheels [being] is “V”-shaped in [its] cross section for supporting the disc-like wheel, the disc-like wheel is mounted under the upper

round hole, ~~at the center of the disc-like wheel thereof~~ an oblong aperture is formed in the center of the disc-like wheel ~~formed~~ and a plurality of teeth is formed ~~at the on a~~ periphery of [the] ~~a~~ bottom of the disc-like wheel ~~provided~~ with ~~teeth~~ for engaging with the driving wheel of the motor, a protrusion 5 ~~upstanding~~ protrudes vertically from the disc-like wheel[;], the motor is disposed in the housing, ~~which can and is to~~ be actuated by signals emitted from the timing circuit, the microswitch is a three-pole switch having a leaf spring employed to be contacted by the ~~upstanding~~ protrusion of the disc-like wheel, ~~with the cooperation of the prior mentioned elements,~~ when the gas 10 stove is turned on ~~is being used~~, the protrusion disengages from the leaf spring of the microswitch, and [the] ~~a~~ normal close pole is switched on to turn on the timing circuit and make it start to count time, when the set time is reached and if the gas is not turned off, the motor will be actuated to drive the disc-like wheel ~~to return to its original position so as to make , and~~ the rotary-knob 15 switch will turn the gas off, at the same time, the protrusion will touch the leaf spring of the ~~inching switch~~ microswitch to cut off the power[;], when the gas is turned off, the protrusion keeps touching the leaf spring of the microswitch, the normal close pole is disconnected from power.

2. (Currently amended) The timer device for gas stove ~~for allowing~~ 20 ~~gas turning off automatically as claimed in claim 1~~, wherein ~~the top surface and the bottom surface of the housing is defined with a round hole for respectively insertion of a conventional rotary knob switch, the rotary knob switch moves along with [the] movement of the disc-like wheel rotates along~~

with a rotation of the rotary-knob switch, so as to achieve an automatic timing effect.

3. (Currently amended) The timer device for gas stove ~~for allowing gas turning off automatically as claimed in claim 1~~, wherein ~~at the center of the disc-like wheel is defined with an oblong aperture for insertion the rotary knob switch, on the periphery of the bottom of the disc-like wheel is provided with plural teeth for engaging with the driving wheel of the motor, and a V-shaped groove is formed around an at the outer periphery of the disc-like wheel, and the oblong aperture formed in the center of the disc-like wheel is used to drive is circularly defined with a V shaped groove for driving the rotary-knob switch.~~

4. (Currently amended) The timer device for gas stove ~~for allowing gas turning off automatically as claimed in claim 1~~, wherein the timing circuit generally includes a quartz oscillating circuit, a counting circuit and a time-setting knob, the counting circuit has a multi-staged divider, which enables signals to be transmitted [with] by using ten minutes as a time unit, the timing-setting knob ~~can set the time with provides~~ ten stages for timing choices.

5. (Currently amended) The timer device for gas stove ~~for allowing gas turning off automatically as claimed in claim 1~~, wherein the timing circuit can be additionally is provided with a battery-detecting circuit [which] having a Zener diode for detecting whether ~~the voltage of the battery power~~ is enough, when the battery power is low, the Zener diode is turned off in case of

~~shortage of the battery power~~, an electrical crystal (Tr4) ~~will be~~ is turned off, and a base electrode (Tr3) receives the signals emitting from a timer (IC7), the timer (IC7) [which] counting time [with] by using second as a time unit will emit signals repeatedly, since the timer (IC7) emits signals once per second, a 5 warning light (LED) flashes periodically so as to inform the user to replace the battery unit.